

Astronomy Merit Badge at Riverbend Park

Welcome to the Astronomy Merit Badge program at Riverbend Park. The program is held at the Riverbend Visitor Center located at 8700 Potomac Hills Street in Great Falls.

Below is the recommended homework to be completed before the program:

Almanac.com/astronomy may be a useful reference for the homework.

We recommend that you download the merit badge worksheets from meritbadge.com and bring these worksheets to class. These worksheets help scouts organize their homework and classwork.

Requirement 1a. Come prepared to describe the proper clothing and other precautions for safely making observations at night and in cold weather.

Requirement 1c. (partial) Explain first aid for injuries or illnesses, such as heat and cold reactions, dehydration, bites and stings.

Requirement 4c. Make two sketches of the Big Dipper. In one sketch, show the Big Dipper's orientation in the early evening sky. In another sketch, show its position several hours later. In both sketches, show the North Star and the horizon. Record the date and time each sketch was made.

Requirement 5b. Using the internet (with your parent's permission), books, and other resources, find out when each of the five most visible planets will be observable in the evening sky during the next 12 months, then compile this information in the form of a chart or table.

Requirement 6b. Sketch the phase and the daily position of the Moon at the same hour and place, for 4 days in row. Include landmarks on the horizon such as hills, trees, and buildings. Explain the changes you observe.

Requirement 9. Find out about 3 career opportunities in astronomy. Pick one and find out about the education, training and experience required for this profession. Explain why this profession might interest you. Come prepared to discuss this.

We recommend beginning the post-class work before the program date. This may help your scout to complete more elements during the program.

What to bring to the program:

- Bring your blue card (Riverbend does not have blue cards.)
- Bring your completed homework. It is OK if you cannot complete the homework before class. You can bring completed homework in at a later date for sign-off.

- Bring/wear weather appropriate clothing/outerwear. We will not go outdoors in heavy rain or thunderstorms. Boy Scout uniform not required.
- Bring a pencil and pen.
- Bring a flashlight, if the program is held after dusk.
- We recommend that you download the merit badge worksheets from meritbadge.com and bring these worksheets to class. These worksheets help scouts organize their homework and classwork.
- Bring a snack and drink or money to purchase some at the visitor center. Bring more substantial food if your program is longer than four hours.

Homework to be completed after the program:

During the program, the merit badge counselor will do a demonstration or explain the process for completing the final merit badge requirements.

Requirement 4a. Identify in the sky at least 10 constellations, at least 4 of which are in the zodiac. We will cover this in class; however, most scouts find that they need more practice before they are ready to be tested. If your scout would like to practice before the program, please view the eastern sky as this will be the view from Riverbend.

Requirement 4b. Identify at least 8 conspicuous stars, 5 of which are of magnitude 1 or brighter. We will cover this in class; however, most scouts find that they need more practice before they are ready to be tested. If your scout would like to practice before the program, please view the eastern sky as this will be the view from Riverbend.

Requirement 5d. Observe a planet and describe what you saw.

Requirement 7c. (partial) Identify at least one red star, one blue star, and one yellow star (other than the sun). We will cover this in class; however, most scouts find that they need more practice before they are ready to be tested. If your scout would like to practice before the program, please view the eastern sky as this will be the view from Riverbend.

Requirement 8. There are 5 options for completing this requirement. Most scouts choose one of the following:

Volunteer at Riverbend's Night Sky Festival. The festival is open to the public and usually draws 200 people. Scouts assist at activity stations and visitor services. These events are usually held twice a year, in the darker months. See Riverbend's website for the upcoming event information. If you are volunteering, you must email Karen at Karen.Sheffield@fairfaxcounty.gov at least one week before the event date.

OR

Visit a planetarium or astronomical observatory. Submit a written report, scrapbook, or video presentation afterward to your counselor that includes the following information: activities occurring there, exhibits and displays you saw, telescopes and other instruments being used and celestial objects you observed.

Many of the requirements require dark sky observation with a merit badge counselor. If your scout was not able to complete these requirements, your scout is welcome to come to the park after one of our Night Sky Festivals for testing and sign-off. These events are usually held twice a year during the darker months. Visit our website for details. To arrange testing after a festival, please call 703-759-9018.

Once the homework, class work and post homework are completed, all elements of the merit badge will be complete.

We're looking forward to working with your scout.

Riverbend's Merit Badge Counselors

Karen Sheffield, Ethan Kuhnenn, Tina Driskell, Chris Kopsick, Michelle Brannon, Marijke Gate

Karen Sheffield

Senior Interpreter, Riverbend Park

Fairfaxcounty.gov/parks/riverbend

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